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*Swan Meadows*

STATE DOCUMENTS

Department of Health and Environmental Sciences  
STATE OF MONTANA HELENA, MONTANA 59601

KALISPELL REGIONAL OFFICE-Box 1031-Kalispell, MT 59901

John S. Anderson M.D.  
DIRECTOR

March 19, 1974

COPIES TO:

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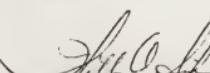
Mr. D. K. Marquardt, P.E., 809 1st Ave. East Kalispell, MT 59901  
Mr. Fletcher Newby, Montana Environmental Quality Council, Helena, MT 59601  
Board of County Commissioners, Flathead County Courthouse, Kalispell, MT 59901  
Montana Fish & Game Dept. Helena, MT 59601  
Flathead Area-Wide Planning Organization 3 Ford Bldg. Kalispell, MT 59901  
B. C. McIntyre, M.D. County Health Office Box 427 Whitefish, MT 59937  
Les Espeland, R.S. Flathead County Sanitarian Box 919 Kalispell, MT 59901  
Water Quality Bureau, State Dept. of Health and Env. Sciences Helena, MT 59601  
Montana State Dept. of Intergovernmental Relations Div. of Planning and Economic Dev  
Helena, MT 59601  
Mr. Ben Wake, Environmental Sciences Division, Helena, MT 59601  
Montana State Library 930 E. Lyndale Ave. Helena, MT 59601  
Montana State Highway Commission, Kalispell Division  
Mr. Wayne Herman, President Flathead Wildlife, Inc. Box 4 Kalispell, MT 59901  
USDA Forest Service Swan Lake District Ranger Bill Pederson, Bigfork, MT 59911  
Mr. John Cochrane, Flathead Lakers, Inc. Box 447 Big Arm, MT 59910  
Polson Outdoors, Inc. Box 1432 Polson, MT 59860  
Student Environmental Research Center Room 212 Venture Center, Missoula, MT 59801  
Dr. John Tibbs, Director, Uof M Biological Station; Yellow Bay, Bigfork, MT 59901  
Trout Unlimited % Mr. Gary Hanson Secy. 136 1st Ave. West Kalispell, MT 59901  
Regional Planning Assoc. of Western Montana 133 W. Main St. Missoula, MT 59801

Gentlemen:

The enclosed Final Environmental Impact Statement represents the decision of this department concerning the proposed Swan Meadows Subdivision, near Bigfork, in Flathead County, Montana.

You have previously received a copy of a Draft Environmental Impact Statement which was written September 6, 1973.

Sincerely,

  
Wilbur O. Aikin, P.E.  
Public Health Engineer  
Environmental Sciences Division

MONTANA STATE LIBRARY  
930 East Lyndale Avenue  
Helena, Montana 59601

Montana State Library



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FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

SWAN MEADOWS SUBDIVISION

A Proposed Subdivision in Flathead County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b) (3), the act controlling both public and private water supply and sewage disposal for subdivision, Section 69-5001; and the act to control water pollution, Section 69-4801 to 4827; the following Final Environmental Impact Statement is prepared by the State Department of Health and Environmental Sciences, Environmental Sciences Division, concerning the proposed Swan Meadows Subdivision, located east of Bigfork in Flathead County, Montana.

Description of Project and Proposed Action

As previously outlined in the Swan Meadows Subdivision Draft Environmental Impact Statement of September 6, 1973, the Montana State Department of Health has received a request for approval of a 30-lot, 17-acre subdivision to be filed as Swan Meadows Subdivision. The property is 2½ miles due east of Bigfork on the south bank of the Swan River. Ferndale, a small rural school site and crossroads community is less than a mile away to the southeast.

The owner-developer is the Golden Goose Corporation of Kalispell; D. K. Marquardt, Civil Engineer and Land Surveyor completed the surveying and engineering portions of the project.

An elapsed time of 188 days has been recorded; all comments have been received and environmental problems under jurisdiction of this department have been resolved. Copies of pertinent statements have been attached to this report for your review.

Summary

As reviewed by this office, the effective size and pattern of lot lay-out contained inherent difficulties in maintaining the required spacing for individual sewage systems and individual water supply systems. In particular, each lot in the eastern back tier was partly (approximately 50%) in an area of possible, or probable, high ground water elevation. If approved, this portion of the subdivision implied a degree of nonexistent building control in which housebuilders could only construct homes in the slightly lower (potentially wet or flooded) areas while retaining the high drier ground for drainfield use.

This concept was difficult for both the State Department of Health and the Flathead County Health Department to accept although it was never established that this was, in fact, the common ground water situation in an average year.



The problem was compounded by the fact that the developer was disinclined to create a community water system, and since the same abundant ground water is available at shallow depth for drinking water purposes---6 to 20 feet---full development would likely have brought with it controversy and contaminated wells.

To meet this and other criticism the developer has kindly removed the back-row of controversial lots entirely for the submitted plat. In the view of the State Department of Health this deletion has answered the primary objection, and the 18 lots, instead of 30, on the new plat are now approvable.

While the matter of ground water table, water wells and septic tank drainfields was the primary thrust in the responses made to this statement, other serious environmental or land use reservations were expressed:

1. The high agricultural capability of the land should exclude it from all considerations for subdivision.
2. The peripheral drain ditch to be constructed as a precaution against future flooding was an unwanted environmental disruption.
3. The instability of soils along the river front should be given full consideration and further protection before approval is given.
4. Roads should be constructed to county standards.
5. Subdivision of any size would add to the undesirable build-up of nutrients in the hydrologic system.
6. The approval of subdivision in the lower Swan Valley poses a continuing collective threat to wildlife in this area.
7. An area should be set aside guaranteeing public access to the river.
8. The subdivision would add to overcrowding of area rural schools.

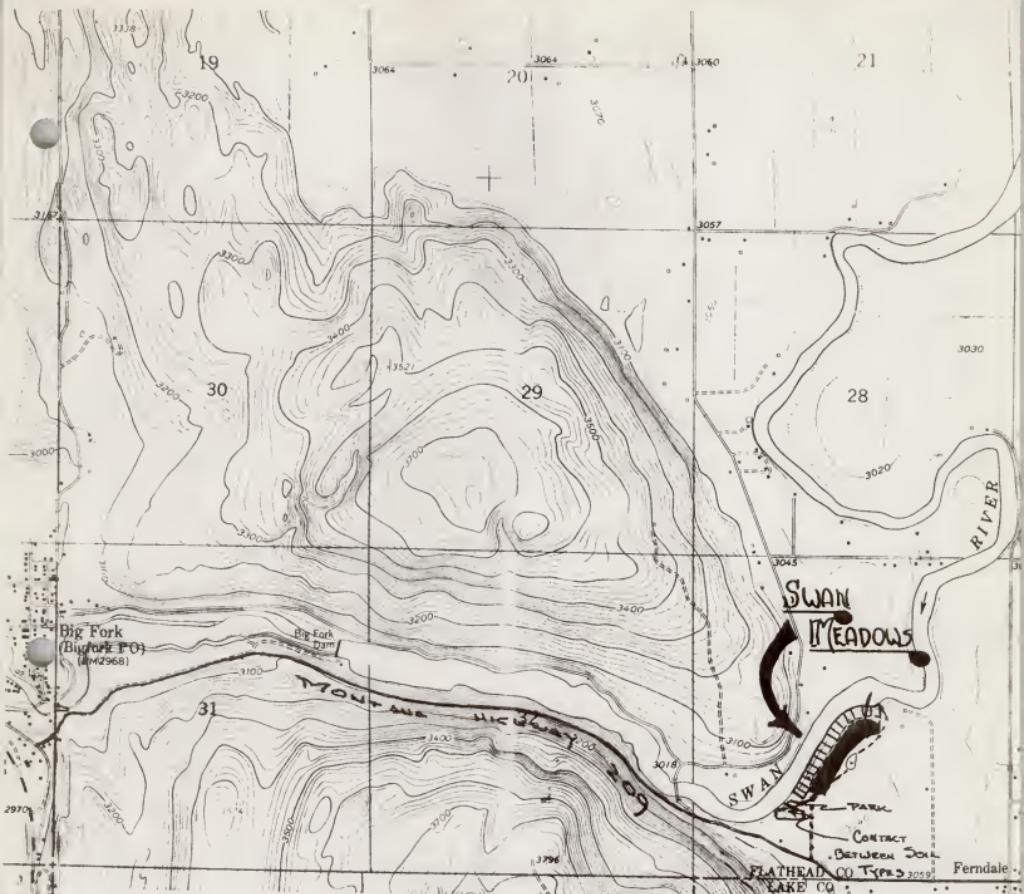
In removing twelve lots from the plat it is obvious that several of these enumerated factors are modified in terms of total impact. Points 1, 5, and 8 are partly mitigated, and point 2 may be completely satisfied. With regard to point 7, a streamside park has been dedicated to the county and the access road is being brought to county standards.

#### Conclusions

Plans and supplemental information relating to water supply, sewage and solid waste systems for the Swan Meadows Subdivision are now in compliance with Section 69-5001 to 69-5005, Revised Codes of Montana and it is the intention of this office to affix a stamped endorsement along with the conditions of approval to the final plats to be recorded with the Flathead County Clerk and Recorder.

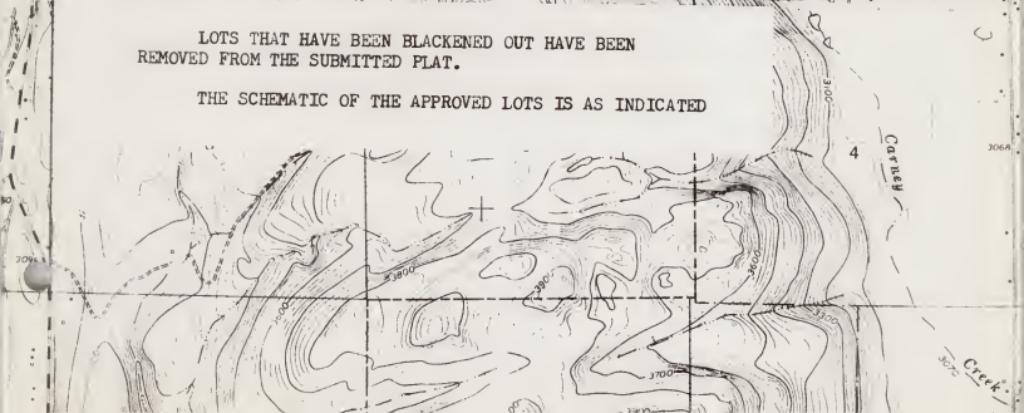
A letter of concurrence from the Flathead County Health Department has been received and filed with this office. In the final approval, the County Health Dept. has also appended special conditions for individual sewage systems. The developer has agreed, and they have been written into the formal approval statement.





LOTS THAT HAVE BEEN BLACKENED OUT HAVE BEEN  
REMOVED FROM THE SUBMITTED PLAT.

THE SCHEMATIC OF THE APPROVED LOTS IS AS INDICATED





## STATE OF MONTANA

## Environmental Quality Council

FLETCHER NEWBY  
EXECUTIVE DIRECTOR

CAPTION STATION, HELENA, MT 59601

SENATE MEMBERS  
SENATE ENVIRONMENTAL COMMITTEESENATE MEMBERS  
SEN. LEMER PLUMB, CHAIRMAN  
SEN. GEORGE DANROW  
SEN. LEON L. MC CALLUM  
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MR. DAVID L. REED  
MR. RICHARD J. MURKIN  
MR. ALVIN L. SCHLESINGER  
DR. R. L. COOPER

October 9, 1973

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MONTANA DEPARTMENT OF HEALTH  
AND ENVIRONMENTAL SCIENCES  
KALISPELL REGIONAL OFFICE

Mr. Wilbur O. Aikin, P.E.  
 Department of Health and  
 Environmental Sciences  
 P.O. Box 1031  
 Kalispell, Montana 59901

Dear Mr. Aikin:

This will acknowledge receipt of the Draft Environmental Statement for Swan Meadows Subdivision.

We will accept this statement pending any further expression of public interest.

Sincerely,

FLETCHER E. NEWBY  
 Executive Director

By

*Loren L. Bahls*

Loren L. Bahls, Ph.D.  
 Staff Ecologist

cc: Dan Vichorek  
 FEN/LLB/ss



# STATE OF MONTANA



## DEPARTMENT OF

### FISH AND GAME

Helena, Montana 59601  
October 10, 1973

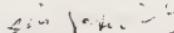
Mr. Wilbur O. Aikin  
Department of Health and Environmental Sciences  
Kalispell, Montana 59901

Dear Mr. Aikin:

As requested, our regional office has reviewed the Swan Meadows subdivision near Big Fork in Flathead County, Montana. Enclosed for your information is a copy of the memo prepared subsequent to that review.

Anything you could do to alleviate the potential damage to the ecosystem would be greatly appreciated.

Sincerely,



James A. Posewitz, Administrator  
Environment and Information Division

JAP/sd

Enc

cc: Fletcher Newby  
Dan Vichorek  
Otis Robbins



STATE OF MONTANA  
DEPARTMENT OF FISH AND GAME  
HELENA, MONTANA

*Office Memorandum*

TO : Wes Woodgerd      Attn: Jim Posewitz  
FROM : Tom Hay           By: Otis Robbins  
SUBJECT: Swan Meadows Subdivision

DATE: October 4, 1973

The subject subdivision is located about 2 1/2 miles east of the community of Big Fork and on the banks of the Swan River. This subdivision is one of many planned or active subdivisions in this vicinity. The lower Swan Valley in general is one that is a very important wildlife area containing vital white-tailed deer winter range, upland game bird habitat and a variety of game fish habitats.

Singularly these developments may not pose a threat to wildlife, however, collectively they could be catastrophic with each new development representing another loss of these animals and their habitat.

Water supply and sewer systems seem to be a problem in development of the area. Additional nutrients from sewage disposal will no doubt enter the ground water supply and being immediately adjacent to the river will reach Swan River rather rapidly. This will add to the high load of nutrients reaching Flathead Lake. This lake being only two miles distance.

The proposed subdivision being on the immediate low banks of the Swan River will be subjected to flooding. Portions of the land have severe limitations for sewage disposal.

Lot density is described as great as statutes will allow, maximizing possible problems.

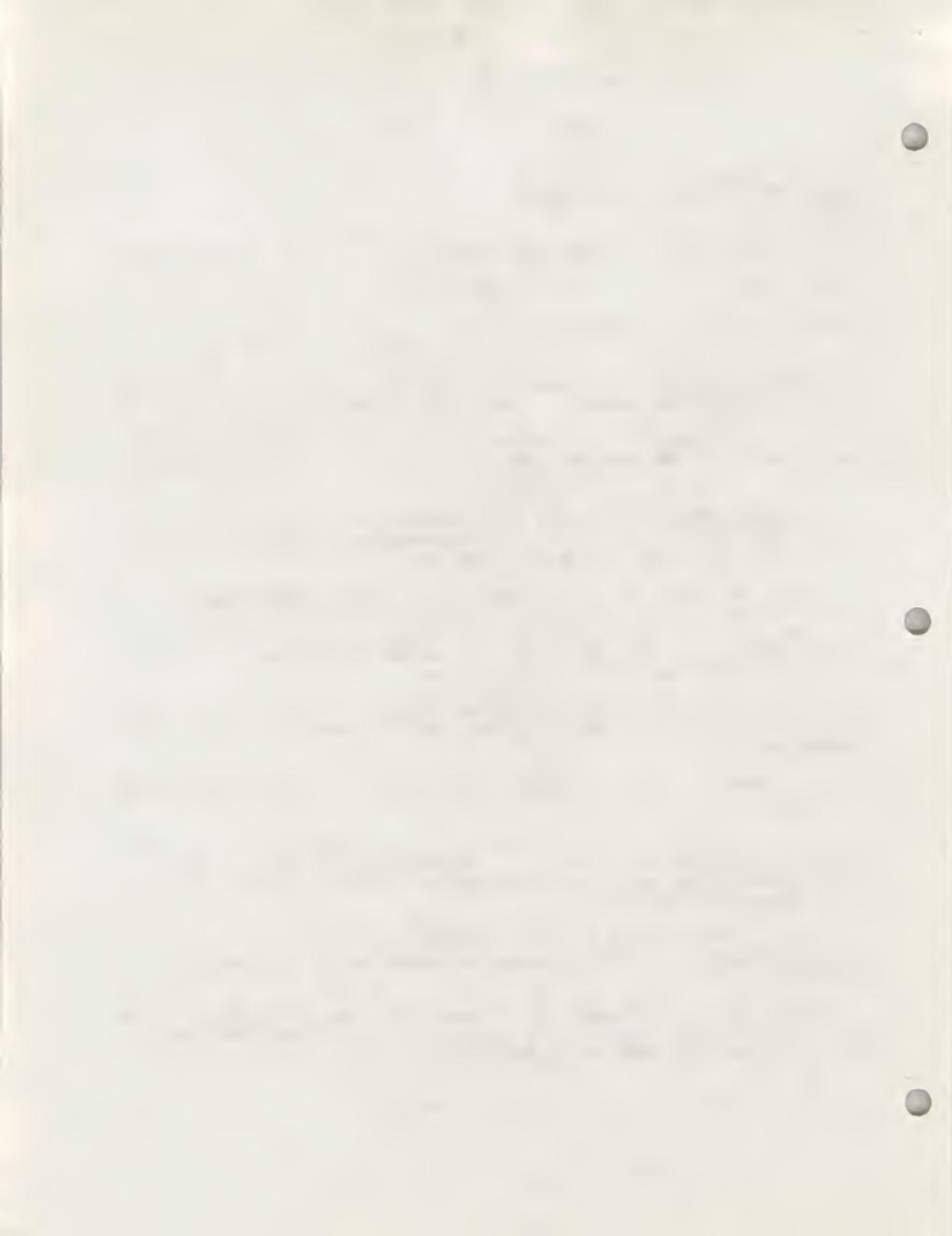
Although a series of eight (8) covenants are proposed to be a part of the development, enforcement of these is the responsibility of the landowners. These covenants thus have no more value than an attempt to try to alleviate an almost intolerable condition.

Based on the potential problems of sewage, drainage, flooding, wildlife and social problems this type of development should not be permitted to be realized.

If this area is permitted to be developed then every precaution should be taken to insure that nutrients shall not reach the river. There should be an area set aside to guarantee public access to the river.

Otis Robbins

OR/lb



# FLATHEAD WILDLIFE, Inc.

P. O. BOX 4  
KALISPELL, MONTANA

October 2, 1973

Wilbur O. Aikin  
Public Health Engineer  
Box 1031  
Kalispell, Mont. 59901

Dear Mr. Aikin:

The Environmental Impact Statement for the proposed Swan Meadows Subdivision was discussed at the October board of directors meeting of Flathead Wildlife, Inc.

Concern was expressed over the impact this subdivision would have on the water quality of the Swan River and eventually Flathead Lake.

Flathead Wildlife, Inc. continues to oppose the buildup of nutrients and pollution of local waters, particularly a stream of the quality of the Swan River.

Sincerely,



Wayne E. Herman, President  
Flathead Wildlife, Inc.



The Wealth Of Our Natural Resources  
Preserve It By Conservation, Not Conversion





# FLATHEAD COUNTY

## HEALTH DEPARTMENT

LES ESPELAND R.S.  
COUNTY SANITARIAN

Box 919 Kalispell, Montana Phone 756-9481

MARION FINLEY R.N.  
COUNTY NURSE

A.E. SCHOENHUTH R.S.  
ASST. COUNTY SANITARIAN

BRUCE C. MCINTYRE M.D.  
COUNTY HEALTH OFFICER

THELMA STROM R.N.  
ASST. COUNTY NURSE

September 27, 1973

Will Aiken, P.E.  
State Department of Health and  
Environmental Sciences  
Box 1031  
Kalispell, Montana, 59901

RE: Draft Environmental Impact Statement for the proposed Swan Meadows Subdivision

Dear Mr. Aiken:

Judging from the comments and complaints our office has received regarding the subdivision, it is clearly controversial. Various people from the area including two septic system installers have expressed opposition to the development because of the hazards to groundwater pollution and to degradation of water quality in the river. If the people who install septic systems professionally in the area are alarmed, it behoves our office to investigate the area more thoroughly.

During the high water period this year I observed the level of the Swan River approximately  $\frac{1}{2}$  mile upstream from the proposed Swan Meadows. The level of the river was 18" to 2 feet below the water mark on power poles along the river's edge. When I revisited the same area, one (1) week later, the water level of the river was 18" to 2 feet lower again. The drop was remarkable. The facts, that the water table is considerably lower this year, are well documented not only by the river levels but by well depths of the area also.

In review of the plat presented to our office which contains perc tests, soils, and groundwater information, I have several comments. The lots fronting the river do not have 20,000 sq.ft. of usable area. This point was discussed at the public hearing for the subdivision. The major question still unanswered is, do you need 20,000 sq.ft. surveyed area or 20,000 sq.ft. usable area to meet the subdivision requirements. Perhaps the state will shed some light on this point of conjecture.

Notations on groundwater were recorded on June 5, while the river elevation was recorded on May 25, an 11 day time difference. Discussion with the engineer who took these elevations, revealed that this was done for reasons of saturation and hydrolic pressure across the "horse shoe" of the Swan River, the idea has great merit. Whether May 25 was the high point of the river was not known, and whether June 5 was the actual high point of the groundwater was not known either. It should be noted that without actual daily monitoring during the period of maximum groundwater, the tests may be greatly inaccurate. How long were the test holes allowed to remain open?



I have witnessed fresh excavations in the area which had no water in them, when they were allowed to stand 2 days, they filled with water. This was in the soil on the Flowberg subdivision just upstream a short distance. If test hole #1 was dug, then evaluated immediately and covered, the results would be invalid. The groundwater elevation of 101' and 98' indicate a great fluctuation in the groundwater table possiblly due to this phenomena. Yet it is quite conceivable that those lots with ground elevations of under 107' might not be able to meet the required 4' seperation even with the purported low groundwater of 73.

If indeed this year is exceptionally low for groundwater, and if we give our approval to the subdivision, and if in subsequent years, the groundwater is considerably higher, it will be much to our chagrin. We will be forced to inform people that they cannot install a septic system on a particular lot because they cannot meet the 4' seperation.

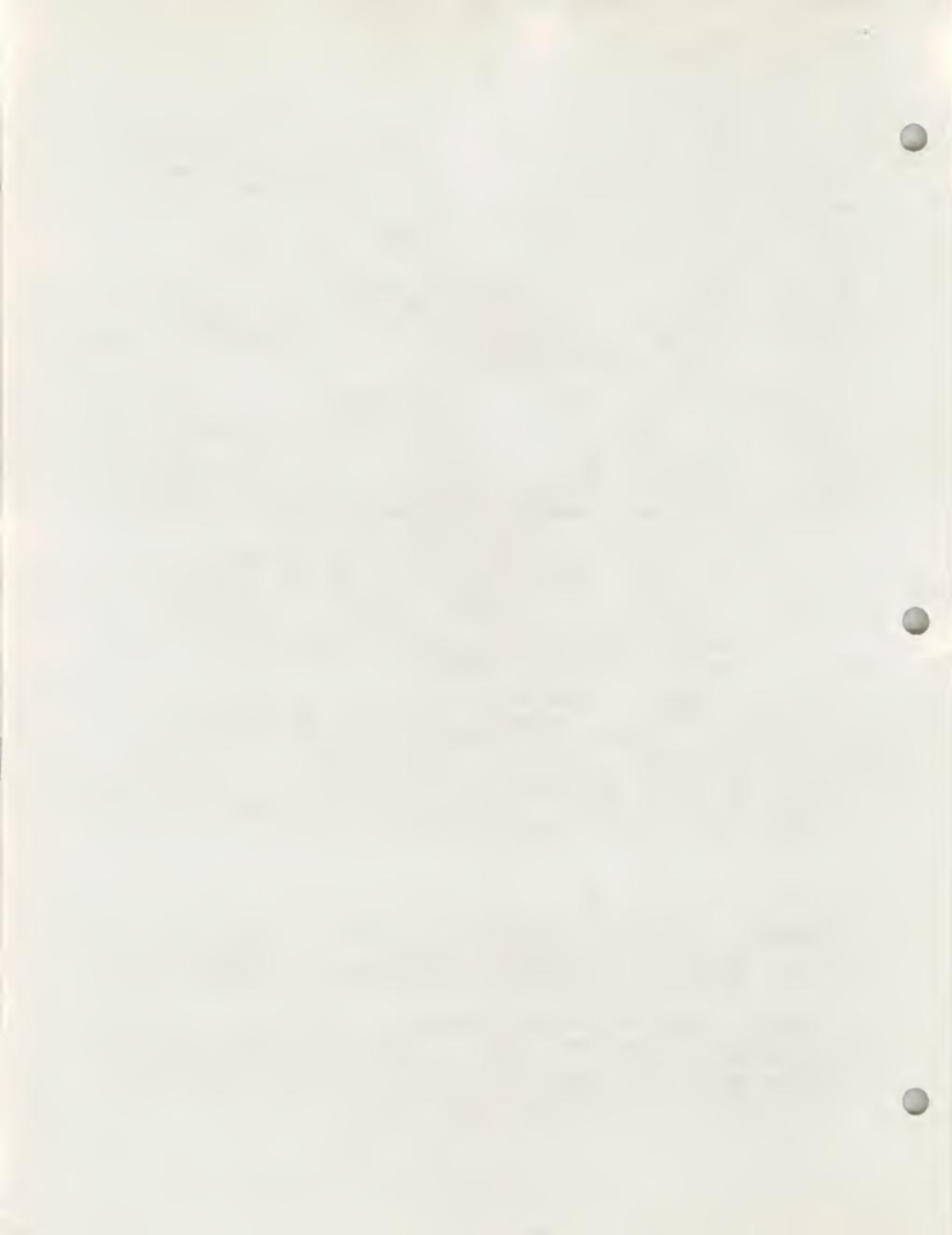
Consider the installation of the septic systems on the subdivision. Restrictive covenants place the septic system and houses in definite locations. Because of the topography it would require pumping systems on many of the lots in order that the 4' seperation be maintained. Since each home site would have to be inspected prior to the issuance of a permit and then again an inspection of the installed septic system would be required to assure compliance. On a dollars and cents basis for mileage and sanitarians time, this computes to nearly \$20 per lot, this does not include secretarial time for issuing the permit or printing costs for permits. If \$5 is charged for the permit, it will cost the taxpayer \$15 per lot on the septic inspections alone. There are thirty lots. Cost will undoubtedly increase in coming years. Again this excess cost to the county is realized from the delicate balance on which the subdivision teter-totters to keep the required 4' integrity of the water table. Take into consideration the excess cost to each lot owner for pumping systems or for the \$3000 to \$4000 Armon system that would have to be installed on lots where no other sewage system is acceptable.

The ES-91 form which was submitted to our office states in section II-6 that no portion of the subdivision was ever flooded. This office has received word that not only were some areas of the land flooded in 64, but some were also flooded in the spring of 72. The situation which results from such high water creates an island of the subdivision. This can be readily visualized and the culverts placed near the southern boundry of the land which originally were intended for placement under the roadway to accommodate such flows add credence to this idea. This office has never, nor will it ever give approval to subdivisions on islands.

In summation:

Groundwater: Because of the controversy surrounding the groundwater table, and because of the incomplete groundwater data for each lot, this office cannot recommend this subdivision for filing. Only when we have gathered first hand data on the groundwater table which allays all fears and allogations will we give our approval.

Water Supply Danger that individual wells on the subdivision may become polluted is merely a point of conjecture. As well documented by this office, enforcement of state standards on well depth is virtually impossible. Because of the lot density and various dangers to contamination of the water supply, we can only recommend a community water system be installed or the lot density be changed.



Sewage Disposal Again, controversy over groundwater depth will have to be resolved before final comment is made. Regardless of the depth, the nutrient content to the river will be sufficiently increased especially when full development is achieved. In light of all the development upstream, how much can the river withstand?

School Impact The 30 lots will add significantly to the overcrowding of the schools in the area. However, the situation does not appear to be alarming since most of the area is still bondable and action has been initiated along the lines of new schools. The citizens of the area are aware of the impending threat and are acting to lesson the impact.

Recommendation Until sufficient groundwater data has been documented by this office we cannot recommend the subdivision for approval. If sufficient data corroborates the presumption that the subdivision becomes an island during higher water periods we cannot recommend any portion of the subdivision for acceptance. Alternatives which might make the subdivision more acceptable could be initiated by the developers. Decreasing the lot density, installing a community water supply and/or making self contained sewer systems the only means of sewage disposal in the restrictive covenants. Any, all, or a combination of these alternatives might make the development palatable to the environmentally conscious public.

Respectfully submitted,

*AC Schoenhuth R.S.*  
A.E. Schoenhuth, R.S.  
Asst. County Sanitarian

CC: Flathead County Commissioners  
Dr. Bruce McIntyre, County Health Officer  
D.K. Marquardt, P.E. 809 1st Ave. E. Kalispell  
Golden Goose Development Co. 1103 So. Main Kalispell

AES/mh



# FLATHEAD COUNTY

## HEALTH DEPARTMENT

LES ESELAND R.S.  
COUNTY SANITARIAN

Box 919 Kalispell, Montana Phone 756-9481

MARION FINLEY R.N.  
COUNTY NURSE

A.E. SCHOENHUTH R.S.  
ASST. COUNTY SANITARIAN

BRUCE C. MCINTYRE M.D.  
COUNTY HEALTH OFFICER

THELMA STROM R.N.  
ASST. COUNTY NURSE

March 18, 1974

State Dept. of Health  
Attn: Will Aikin, P.E.  
P.O. Box 1031  
Kalispell, Mt. 59901

Subject: SANITARY RESTRICTION REMOVAL FOR SWAN MEADOWS SUBDIVISION

Dear Mr. Aikin:

Review of the proposed developments plans and specifications has been completed by this office. I hereby give my approval for the removal of the sanitary restriction contingent to the following.

Water Supply Water shall be supplied to each lot by means of an individual drilled well located on each lot. Wells shall be constructed in accordance with State Regulations.

Sewage Disposal Sewage shall be disposed by means of conventional septic tank and drainfield arrangement only on lots 5 through 15. Sewage shall be disposed by means of above the ground type or self contained type sewage disposal systems on lots 1 through 4 and lots 16 through 18. Furthermore, each drainfield shall be located on the highest portion of each lot which maintains the 100 foot integrity of any open body of water. Furthermore, no conventional drainfield shall be excavated deeper than 3 feet below the natural ground surface at any point. Each lot owner should receive approval for their proposed sewage disposal system prior to the construction of the dwelling.

Respectfully submitted,

*W.C. McIntyre, M.D.*  
A.E. Schoenhuth, R.S.  
Asst. County Sanitarian

cc Dr. B.C. McIntyre  
County Commissioners  
Golden Goose Development Co.  
M. Dean Jellison

**RECEIVED**

MAR 19 1974

MONTANA DEPARTMENT OF HEALTH  
AND ENVIRONMENTAL SCIENCES  
KALISPELL REGIONAL OFFICE

